Foglight for .NET

installation guide

Document Version 1.0

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.NET monitoring functionality copyrighted by AVIcode, Inc.

Installation Preface

Overview

This document describes the procedure for installing the Quest Foglight for .Net Studio. These instructions are intended for an experienced System Administrator. For example, to install Foglight for .Net, you must be familiar with the following tasks in the Windows operating environment:

- Logging in as an administrator
- Identifying the DNS Host Name of a networked server
- Updating Internet Information Services security settings

System Requirements

Foglight for .NET Server Agent

The Foglight for .NET Server Agent component runs on the "Monitored System" (the computer hosting the .NET applications you would like to monitor) and requires:

- Operating System: Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Professional, Windows XP Professional, Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition or Windows Server 2003 Web Edition operating system
- Supported Frameworks: .NET Framework Redistributable Package version 1.1 and 2.0. If using the 1.1 framework, you must also have the Microsoft .NET Framework 1.1 Service Pack 1, or one of the following hotfixes from Microsoft:
    a. For Windows 2000: .NET Framework Hotfix KB840861 and .NET Framework Hotfix KB840512 (Ask Quest Technical Support about obtaining these hotfixes)
    b. For Windows 2003: .NET Framework Hotfix KB840861 and .NET Framework Hotfix KB840512 (Ask Quest Technical Support about obtaining these hotfixes)

Foglight for .NET Web Console

The Foglight for .NET Web Console component runs on the "Management System" (the server that will report the collected exception and performance issues) and requires:

- Operating System: Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Professional, Windows XP Professional, Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition or Windows Server 2003 Web Edition operating system
- Server: IIS 5.0 or IIS 6.0
- Supported Frameworks: NET Framework Redistributable Package version 1.1 and 2.0
- Browser: Internet Explorer 6.0

Visual Studio Plug-in

The Visual Studio Plug-in runs on a "Developer Workstation" (the computer a Developer uses when creating applications with Microsoft Visual Studio) and requires:

- Operating System: Windows 2000, Windows 2003, Windows XP
- You must install the Microsoft Visual Studio .Net, Microsoft Visual Studio .Net 2003, or Microsoft Visual Studio .NET 2005 prior to installing the Quest Foglight for .Net Visual Studio Plug-in

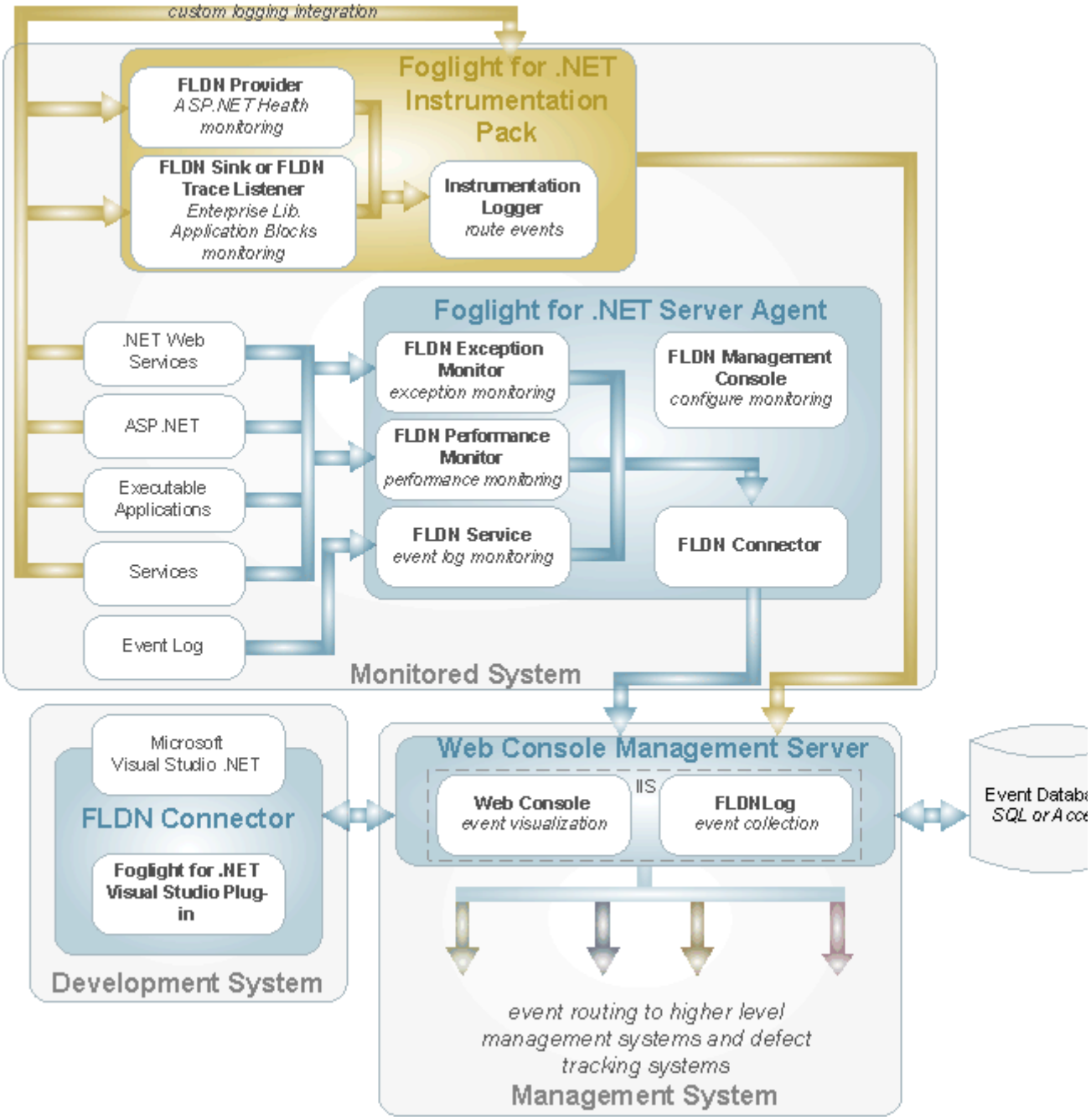
Preparing for Installation

To facilitate the installation of Quest Foglight for .Net, it is considered a good practice to:

- Print this installation guide
- Understand the Quest Foglight for .Net Architecture in the Architecture Overview section of this document.
- Copy the Quest Foglight for .Net msi installer to a location that can be accessed by your "Management System". It may be helpful to burn the downloaded file to a CD or DVD.
- Copy the Quest license to a location that can be accessed by your "Management System". (If you lost or didn't receive your license file please contact your Quest sales representative.)

Quest Foglight for .Net Overview

Quest's Foglight for .Net is the most powerful and flexible solution for monitoring the health of .NET applications running in a production environment. Foglight for .Net monitors your application at runtime, seamlessly integrating into the .NET framework with minimal impact on performance. Foglight for .Net is WMI compatible and can easily integrate with other WMI compatible products.



Foglight for .Net enables event routing between your:

- **Monitored System**, where your applications run and Foglight for .NET Server Agent monitors them exception, performance, event log and instrumentation problems. Quest's Foglight for .NET Server Agent installs on Your Monitored System and attaches on the fly to any .NET Application to collect information about critical exceptions and performance degradation events, as well as about events that may be posted to the Windows Event Log
- **Management System**, where you collect and view all events generated from your various Monitored Systems. Foglight for .NET Management Server installs as a virtual directory on Your Management System and receives events gathered by the Foglight for .NET Server Agent. It also allows you to view events and to route events to other event Management Systems (such as MOM) or to defect tracking systems.
- **Developer's Workstation**, where event links allow you to view the actual line of defective source code via Microsoft Visual Studio .NET. The Foglight for .NET Visual Studio Plug-in allows you to use this functionality.

Your Monitored System

Foglight for .NET Server Agent

Quest Foglight for .Net Server Agent provides the following monitors:

- FLDN Exception Monitor - collects exception information from .NET applications.
- Foglight for .NET Performance Monitor - collects performance information from .NET applications.
- FLDN Service - collects events from the Windows Event Log and instrumentation

The FLDN monitors attach to any .NET application on the fly, without any code modifications or recompilation of the monitored application. The Foglight for .NET Server Agent uses standard common language runtime (CLR) mechanisms, so that it will have no behavioral effect on the monitored application.

FLDN Exception Monitor

FLDN Exception Monitor captures all application exception events, and reports all critical application and system error exceptions. FLDN Exception Monitor filters out non-critical exceptions at an early stage, with minimal performance impact to the monitored software. FLDN defines critical errors as being those that lead to a monitored component's failure. For ASP.NET applications, a critical exception results in the user seeing either the standard or a custom error page. For web services, critical exceptions are those that ASP.NET serializes into valid SOAP messages on the server-side, and deserializes to SoapExceptions on the ASP.NET client.

FLDN Exception Monitor collects runtime information about the call stack, function parameters, local variables and object variables.

FLDN Exception Monitor collects and feeds the exception data into FLDN's event viewer (Foglight for .NET Web Console), where users can correlate exceptions to the offending line of source code.

Foglight for .NET Performance Monitor

Foglight for .NET Performance Monitor measures application performance so that you can quickly identify and quantify performance problems in a production environment and effectively prioritize your problem resolution efforts. Foglight for .NET Performance Monitor allows you to monitor the performance of your application at runtime without modifying your code, and to capture resource specific performance data.

Foglight for .NET Performance Monitor collects performance information about the communications of monitored components with external systems, such as SQL servers, Web Services, TCP/IP servers, OLE DB providers and others. It tracks request times for external resource calls, and raises an event if request times exceed predefined thresholds. The performance event information appears in a tree structure, where the root of the tree is the top-level function of a monitored component, and the leaves of the tree are calls to external systems. If the monitored component is a web application, the tree Root node is a page-process request call. If the monitored component is a web service, the tree Root node is a web-service function call. Foglight for .NET Performance Monitor also collects the runtime information about external system calls (i.e., query strings and query parameters for SQL calls, function names and function parameter values for web service calls).

Foglight for .NET Performance Monitor collects and feeds the performance data into FLDN's event viewer (Foglight for .NET Web Console).

FLDN Service

The FLDN Service is responsible for activating monitoring for Applications, Web Services, Executables, Windows Services, Event Logs and instrumentation.

FLDN Connector

FLDN Connector routes events from the Foglight for .NET Server Agent to event consumers. It consists of an event dispatcher and multiple adapters. When Foglight for .NET Performance Monitor or FLDN Exception Monitor catches an event, it reports the event to the event dispatcher. The event dispatcher routes the event to the appropriate consumer via connector adapters, which are responsible for communications between the event dispatcher and event consumers.

Management Console

The Management Console provides a convenient way to configure monitored applications in Foglight for .Net. It allows system administrators to add applications, to select either performance or event monitoring, and to set thresholds and other options.

Your Management System

Your Management System is the system where you installed your event gathering and visualization software, Foglight for .NET Web Console.

Foglight for .NET Web Console

Foglight for .NET Web Console is a centralized event Management System for enterprise monitoring. With inputs from FLDN Exception Monitor, Foglight for .NET Performance Monitor , Windows Event Log and instrumentation Foglight for .NET Web Console allows data center personnel to monitor deployed .NET applications for slowdowns, faults and failures, and immediately pinpoints the source of the problem. It provides problem diagnosis down to the source-code level without developers having to alter the code. Foglight for .NET Web Console supports a rich event notification infrastructure that allows integration with operations Management Systems such as Microsoft Operating Manager, Tivoli, BMC and HP OpenView.

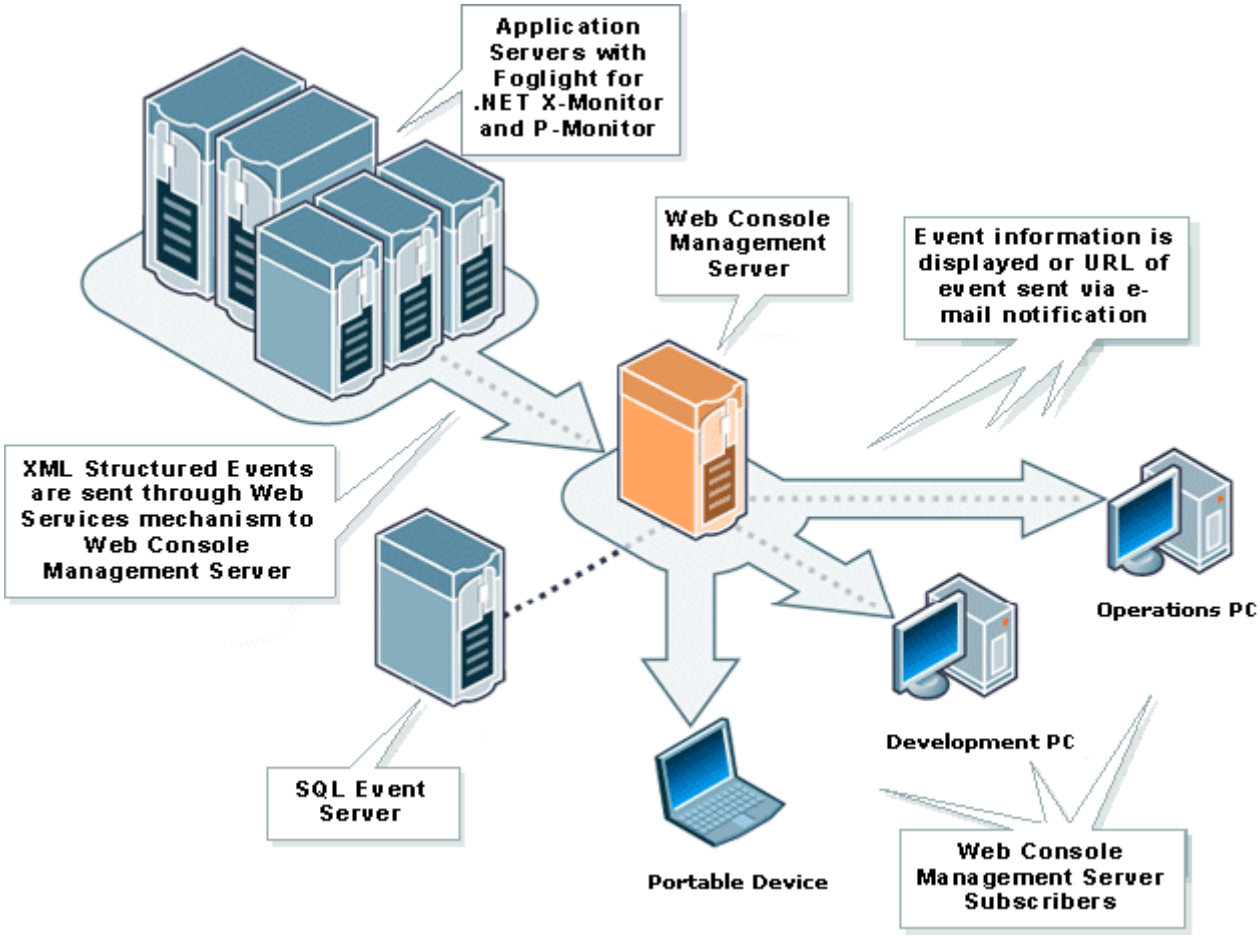
The Developer's Workstation

Foglight for .NET Visual Studio Plug-in

Quest Foglight for .Net Visual Studio Plug-in installs onto a developer's workstation, and provides easy integration between Foglight for .NET Web Console and Microsoft Visual Studio. To use, a developer drills down the event to the line of defective source code displayed in FLDN Web Console, and is then able to open the original source code in Visual Studio.

Deployment Diagram

The diagram below is a simple illustration of a network with Foglight for .Net deployed.


Application Servers with Foglight for .NET X-Monitor and P-Monitor
Web Console Management Server
Event information is displayed or URL of event sent via e-mail notification
XML Structured Events are sent through Web Services mechanism to Web Console Management Server
Operations PC
Development PC
SQL Event Server
Portable Device
Web Console Management Server Subscribers

Foglight for .Net consists of:

- Management Server (Performance Monitor, Exception Monitor, FLDN Service and FLDN Connector) monitors .NET applications. Management Server installs on the monitored servers in the network, which are running web applications under IIS, executables and Windows Services that require monitoring. These servers may be in a development, staging or production environment. Exception Monitor, Performance Monitor, the Windows Event Log Monitor and instrumentation gather raw event data at the .NET framework level. These events go through a Web Services mechanism to the Management Server.
- Foglight for .NET Web Console installs on the management server where the network management software installs. Foglight for .NET Web Console receives events from Management Servers, organizes and presents the raw data as application event logs to the user and to FLDN Web Console subscribers. Subscribers include email, WMI and the Windows Event Log.
- Events may be stored in a Microsoft Access database, or in a SQL database.

Installing Quest Foglight for .Net

Overview

Please follow the instructions for doing either a first-time installation or upgrading your existing installation.

First Time Installation

If you are performing a new installation, please

- Follow the instructions for installing the Foglight for .Net components

- Optionally follow the directions for configuring FLDN Web Console to use SQL Server

Foglight for .Net Installation

Overview

Foglight for .Net is comprised of three software components: FLDN Web Console Server, Foglight for .NET Server Agent, and the Foglight for .NET Visual Studio Plug-in. Each component plays a specific role in the collection and reporting of application issues. To fully install Foglight for .Net in your development or product environment, all three components are required. The following steps document where and how to install the three Foglight for .Net components.

NOTE: If you are upgrading from prior version of Foglight for .Net, please follow the directions contained within the "Upgrade_Instructions.pdf" file that came bundled with the Foglight for .Net download ZIP file.

Unzip the files

- Identify your Management System. The Management System is the machine where you collect and view all events generated from your various Monitored Systems.
- Unzip the files onto the Management System.

Installing Foglight for .NET Management Server

Foglight for .NET Management Server installs as a virtual directory on your Management System and receives events gathered by the FLDN Server Agents.

- Double-click FLDN Web Console .msi installer file to launch the FLDN Web Console Installer.
    - **Welcome**: The Quest Foglight for .Net FLDN Web Console Setup prepares the Install Shield Wizard, which will guide you through the FLDN Web Console installation process. Click 'Next' to proceed with the installation.
    - **License Agreement**: Read and accept the license agreement. Click 'Next'
    - **Customer Information**: The Customer Information window allows you enter your user and organization name, and to restrict application access if desired. Enter your user name and organization name. Select whether anyone other than the user you indicated can access this application. Click 'Next'
    - **Destination Folder**: By default, the files will be unpacked to *[drive]*:\Program Files\Quest\Foglight for .NET\ManagementServer. You may select to install the files to a different destination folder. If you wish to install the files to a different folder, click the 'Change...' button, and browse to the desired folder. Click 'Next'
    - **FLDN Web Console Configuration**: Specify the DNS host name of the FLDN Web Console location such as *machinename.mycompany.com*. You may also enter a port number for in the case of a non-default installation, by following the format *machinename.mycompany.com:[port].* Click 'Next'

    - **Ready to Install the Program**: Setup now has enough information to install the files onto the machine. Click the

'Install' button.

- **Installing Quest Foglight for .NET Web Console**: Wait for the files to install
- **InstallShield Wizard Completed**: Click Finish to close the installation wizard.
- Make sure that you can open FLDN Web Console via:

☐ Start
☐ Programs ☐ Quest
☐ Quest Foglight for .Net
☐ Foglight for .NET Web Console

Installing the Foglight for .NET Server Agent

Identify the "Monitored System"

"Monitored Systems" are the computers where the .NET applications you wish to monitor reside. Be careful not to confuse the "Monitored System" with the "Management System". If you are unsure about which computer is your "Monitored System", please review Foglight for .Net Architecture section of this document.

Manual and Remote Installations

Decide whether to manually install the agents from the remote Monitored Systems, or whether to deploy agents to multiple remote Monitored Systems silently via a remote deployment tool such as SMS.

Manual Installation: From the Monitored System, open a web browser, and browse to FLDN Web Console on the Management System at http://*managementsystem.companyname.com:{port}*/FLDN. Ensure that you can open FLDN Web Console.

- open a browser to FLDN Web Console from the server to be monitored
- open 'Tools' menu from the main FLDN Web Console menu bar
- select the 'Deployment...' menu item
- wait for the 'Deployment Wizard ' to open
- select 'Download the Quest Foglight for .Net Server Agent'
- click 'Next >'
- click the 'Download' button to download the MSI installer for the agent
- run the MSI installer from the location that you downloaded to
- set the Management Server location during the installation. ☐ You must set this location correctly in order for events to reach FLDN Web Console. Be sure to test connectivity through the Management Console before enabling monitoring.
- when the installation is completed, click 'Next >' in the Deployment Management Wizard
- click 'Finish'

Remote Silent Installation: From the Management System, open FLDN Web Console via:

☐ Start
☐ Programs ☐ Quest
☐ Quest Foglight for .Net
☐ Foglight for .NET Web Console

Ensure that you can open FLDN Web Console.

The command file 'install.command' allows you to deploy the agent to multiple remote monitored servers silently.

- open a browser to FLDN Web Console from the server to be monitored
- open 'Tools' menu from the main FLDN Web Console menu bar
- select the 'Deployment...' menu item
- select 'Download Files for Quest Foglight for .Net Server Agent silent installation'
- click 'Next >'
- click the first 'Download' button to download the MSI installer for the agent
- click the second 'Download' button to download command file for the agent
- run the install.command file from the location that you downloaded to
- click 'Next >' in the Deployment Management Wizard
- click 'Finish'

Foglight for .NET Visual Studio Plug-in

Identify the "Developer Workstation"

A "Developer Workstation" is a computer that is used by a programmer to develop .NET applications. Microsoft Visual Studio must be installed on this machine as the programmer's development platform. If you are unsure about which computer is your "Developer Workstation", please review the Foglight for .Net Architecture section of this document.

Installation

From the Developer Workstation, open a web browser, and browse to FLDN Web Console on the Management System at http://*managementsystem.companyname.com:{port}*/FLDN. Ensure that you can open FLDN Web Console.

- open a browser to FLDN Web Console from the developer's machine with the Visual Studio project
- open 'Tools' menu from the main FLDN Web Console menu bar
- select the 'Deployment...' menu item
- wait for the 'Deployment Wizard ' to open
- select 'Download the Quest Foglight for .Net VS Plug-in'
- click 'Next >'
- click the 'Download' button to download the MSI installer for the Visual Studio Plug-in
- run the MSI installer from the location that you downloaded to
- when the installation is completed, click 'Next >' in the Deployment Management Wizard
- click 'Finish'

Configure Management Pack for use with Microsoft SQL Server 2000

By default, the Quest Management Pack for .NET will write all events to a Microsoft Access database. For use in a production environment, Quest recommends configuring the Management Pack to use a SQL Server database.

NOTICE: For first-time installations, never change over to using SQL without first testing that you can receive and store events in the default MS Access database.

From your management server, open the Management Server Configuration file. You may edit the configuration file via Microsoft Visual Studio .NET, or by using a text editor:

Start
Programs Quest
Quest Foglight for .Net
Foglight for .NET Configuration
Management Server Configuration

You may edit the configuration file via Microsoft Visual Studio .NET, or by using a text editor.

The first step to prepare your environment is to identify the server on which you will install the FLDN Web Console database. Once this is determined, create and configure the database.

Following are the steps for configuring FLDN Web Console to use with Microsoft SQL Server 2000.

- Install Microsoft SQL Server 2000 on appropriate server.
- Create a database named "FLDN" on Microsoft SQL Server 2000.
- Run the FLDN.sql script in the created database. The script is located in the "Database" subfolder of the FLDN Web Console root folder.
- Open the FLDN Web Console configuration file
- Find the <userdata> section
- Comment out or remove "DataSourcePath" key.
- Uncomment the "connectionString" key
- Set proper settings for connection string.
  (Typical required settings are server name, login and password)

Example:

Before:

```
<userdata>
<add key="DataSourcePath" value="Database\FLDN.mdb" />
<!--
<add key="connectionString" value="Provider=SQLOLEDB;network=dbmssocn;
Server=localhost;database=FLDNManager;uid=;pwd=;"/>
-->
</userdata>
```

After:

```
<userdata>
<!--
<add key="DataSourcePath" value="Database\FLDN.mdb"/>
-->
<add key="connectionString" value="Provider=SQLOLEDB;network=dbmssocn;
Server=localhost;database=FLDNManager;uid=;pwd=;"/>
</userdata>
```

- Run the Database\DBInit.exe utility. This utility will check connection to the database, write errors to the output and to the event log in case of problems and initialize database with default values needed for correct functionality.

After Installing

Review the User Manual

After completing the installation, please take the time to review the User Manual in order to familiarize yourself with some of the finer details of Quest Foglight for .Net. The User Manual is available on your Management System (where you installed Management Server) via:

- Start
- Programs □ Quest
- Quest Foglight for .Net
- FLDN User Manual

Obtain and Install the Quest Foglight for .Net License

Before using Foglight for .Net, you must install an Quest license. If you do not have an Foglight for .Net License, please contact your Quest sales representative.

To add your license:

- open 'Tools' menu from either the main FLDN Web Console window or from an Event Details window
- select the 'Licenses...' menu item
- wait for the 'License Management Wizard' to open
- select 'Add license'
- click 'Next >'
- select 'I already have have a license file
- click 'Next >'
- either type in the full file path to the license file, or use the 'Browse...' button to locate it.
- click 'Next >'
- a message will let you know that the license has been added
- click 'Next >'
- click 'Finish >'

Technical Support

Support Region	Hours of Operation	Languages Supported	Phone Number
North America	5:00am - 5:00pm PST Monday to Friday	English	1.800.306.9329 or 949.754.8000
EMEA Europe, Middle East, Africa	8:00am - 5:30pm GMT Monday to Friday	English, French, German, Italian	0800.834.967 or 44.01628.518007
Asia Pacific Singapore	6:00am - 5:00pm Monday to Friday	English, Mandarin, Cantonese, Malay	1.800.720.5555 or 65.6720.2566
Asia Pacific Australia	8:00am - 7:00pm Australia EST Monday to Friday	English, Mandarin, Cantonese, Malay	1.800.999.997
Asia Pacific New Zealand	8:00am - 7:00pm Australia EST Monday to Friday	English, Mandarin, Cantonese, Malay	0800.931.916
For all regions - email: support@quest.com **Please Note**: You must register on SupportLink prior to sending an email to support@quest.com For SupportLink registration, see the http://support.quest.com/supportlink_gettingstarted.asp.			

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